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Hara

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(54) **EXPOSURE APPARATUS AND DEVICE
FABRICATION METHOD**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(58) **Field of Classification Search**

CPC ... G03F 7/709; G03F 7/2041; G03F 7/70325; G03F 7/70341; G03B 27/42

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See application file for complete search history.

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Related U.S. Application Data

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ABSTRACT

A liquid immersion exposure apparatus includes a projection system having a last optical element, a first member having a liquid supply port, a second member having a liquid recovery port, and a driving system which electromagnetically moves the first member, the second member, or both of the first and second members. A substrate is moved below and relative to the last optical element, the first member and the second member. A liquid supply from the liquid supply port and a liquid recovery from the liquid recovery port are performed to form a liquid immersion area on a portion of an upper surface of the substrate. The substrate is exposed with a beam through liquid in the liquid immersion area.

61 Claims, 6 Drawing Sheets

